

**ABSTRACT**  
**APPARATUS FOR THE TRANSMISSION AND/OR RECEPTION OF**  
**DATA, AND METHOD FOR CONTROLLING THIS APPARATUS**

5       The invention relates to an apparatus for the transmission and the reception of data comprising:

          a plurality of inputs and a plurality of corresponding outputs for the respective coupling to the incoming part and outgoing part of a plurality of links, wherein, to each input and to each output, is associated a respective  
 10       switching device (14<sub>1</sub>, 14<sub>2</sub>, 14<sub>3</sub>, 14<sub>4</sub>),

          for each couple of input and output, an active terminating board (12<sub>1</sub>) for coupling this input and this output and for further transmitting data,

          at least one spare terminating board (12<sub>2</sub>) which is able to replace a defective active terminating board,

15       each terminating board comprising means (20<sub>1</sub>) adapted to test the quality of the link (W) to which it is associated and to compare said quality to a predetermined criterium and to generate a control signal to first control means (26<sub>1</sub>, 28<sub>1</sub>) of said each terminating board, the first control means being adapted to replace the defective link by another link, if this quality does  
 20       not comply with the predetermined criterium, and

          second control means (26<sub>1</sub>, 41) coupled to the active and spare terminating boards adapted to modify the operation of at least one of said switching devices such that in case of failure of an active terminating board, it is replaced by the spare terminating board.

25       With a structure of this kind, the protection ratio of the links and of the terminating board are selectable independently from each other.

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